DOCUMENT RESUME

ED 165 055 CG 013 124

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TITLE Fantasy Play in Child Psychotherapy.
SPONS AGENCY National Inst. of Mental Health (DHEW), Rockville, Md.
PUB DATE 78
GRANT MH-16444
NOTE 87p.; Paper presented at the Annual Convention of the American Psychological Association (Toronto, Ontario, Canada, August, 1978)

EDRS PRICE MF-$0.83 HC-$4.67 Plus Postage.
DESCRIPTORS *Behavior Patterns; Child Psychology; *Children; Creative Expression; Developmental Psychology; *Helping Relationship; Maturation; *Pretend Play; Research Projects; *Supervision; Therapists; *Training
IDENTIFIERS *Self Presentation

ABSTRACT

Relationships among adult and young children's behavior in extended play encounters were examined. One group of normal six-year-old children completed 20 play encounters, while a second group of clinic-referred children completed 15 play encounters. Each child encountered either a trained/supervised or an untrained/unsupervised college undergraduate. Analyses of videotapes made of the "non-directive" play encounters indicated that the children who encountered trained/supervised undergraduates emitted greater numbers of fantasy behaviors, especially those indicative of mature, coping and adaptive functioning than did children encountering untrained/unsupervised undergraduates. Adult involvement in play and allowing the child self-direction seemed key behaviors in eliciting such child behavior. (Author/JLL)

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Fantasy Play in Child Psychotherapy

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Presented as part of a symposium, "Imaginative Play in Childhood," held during the 1978 meeting of the American Psychological Association, Toronto, Canada. The research reported within was supported, in part, by Grant MH-16444 from the National Institute of Mental Health, United States Public Health Service. We would like to thank Lawrence A. Messe', Lucy Rau Ferguson and William D. Crano for their help and consultation. We would also like to thank Allan Scholom, Sharon Berliner, Loretta Laurenitis, and Maxine Liberman who were group leaders and research assistants.

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Fantasy Play in Child Psychotherapy

The study of the process of child psychotherapy, especially the study of changes in fantasy behaviors over time, has had a long past and a very, very short history. Case studies and theory abound (see e.g. Axline, 1969; Fineman, 1962; Freud, 1964; Klein, 1961; Maclay, 1970) but little empirical research has been conducted.

Our own long term goals have been (1) to accumulate a series of measures that can be used to study empirically, the process (and outcome) of child psychotherapy including measures that would indicate "mature" and "healthy" child development and functioning and (2) to determine the adult behaviors that, possibly, are causative of such positive adaptation.

We would like to take this opportunity to summarize the results of two studies that have explored the relationships among adult and young children's behavior in extended play encounters. First is a summary of a study previously published (Reif and Stollak, 1972) but undeservedly neglected which explored the effects of training undergraduates to emit "therapeutic" behaviors on their own and normal children's behavior over twenty play encounters.

METHOD

Undergraduate Subjects

Through an advertisement in the university newspaper, undergraduates were solicited to participate in a year long experience. From the group of approximately fifty respondents, nine students were selected (on the basis of being able to meet at the same time) to undergo the year long training procedures described below. The experimental group of nine students consisted of five males and four females. All were either juniors or sophomores. They had no specific major or academic interest in common other than their desire to learn about children.

These undergraduates were instructed to find one child in the local community, of their own sex, with whom they would be able to engage in weekly play sessions in a standard playroom on campus, for the entire year. It was further stipulated

that the child had to be between the ages of four and seven, and that undergraduates should not have had any previous contact with the child whom they selected. Contacts with the children were established using an introductory letter to the parents. Parents were assured that they would be allowed to observe any or all of their child's play sessions. In addition, verbal agreements concerning the extent of the play sessions were made between the child and the undergraduate.

A control group of nine undergraduates was randomly selected from the same pool of respondents described above. Using identical instructions, these students likewise found one child between the ages of four and seven with whom they would engage in weekly play sessions. The difference between the control and experimental groups of undergraduates was that the control group of students did not undergo the training procedures described below. These control students were informed that, as a result of random selection, they could, if they so desired, be part of an "independent study" group. The only requirement made of them would be their weekly play sessions for the entire year, and weekly reports based on those sessions. Reading lists were distributed, but no assignments were made. Essentially these control students were told that they would be given the opportunity to experience a relationship with one child for the academic year and that what they learned from their relationship, readings, thoughts, etc., was entirely of their own choice and pursuit. No classes would be held until the end of the academic year, at which time students would be able to air their views, experiences, questions, etc. Originally, twenty students were informed of their opportunity to participate. Of those twenty, fourteen volunteered, and nine were included in the experimental design (five males and four females).

This study, therefore, consisted of two groups of nine undergraduates, each containing five males and four females. The experimental group ("trainees") was exposed to training in "therapeutic" techniques with children, while the control groups received no such training. The nine control students simply played with

their children once a week.

Child Subjects

The eighteen children selected by the undergraduates formed the experimental and control groups of children. Each group of nine children consisted of five boys and four girls, ranging in ages from four to seven years. Exact ages of each child are given in Table 1.

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insert Table 1 about here

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All children came from Caucasian middle class homes. Two children of each group (one boy and one girl) came from homes where the father was absent as a result of divorce. One girl in each group did not attend any kind of school, while the rest of the children attended either nursery, kindergarten or first grade. All could have been considered "normal" in the sense that none had been referred to any mental health facility. All children had at least one sibling, with the exception of one girl in the experimental group.

The Training Procedure

During the academic year, the experimental group of undergraduates engaged in continuous training in specific techniques of playing and talking with children. Techniques were based on a client-centered model of play therapy (Axline, 1969; Moustakas, 1959). Initially, training took the form of didactic lectures and specific instructions (Linden and Stollak, 1969). During the first half of the academic year, all students in the experimental group were observed in interactions with their child. Comments and discussions immediately followed each observation. Emphasis was placed on helping the undergraduate approach the model of behavior required of him/her. At the same time, anxieties about performing adequately were responded to with non-critical remarks. As the students became more comfortable with the specific techniques, emphasis shifted in in-

dividual supervision to an understanding of the child's behavior.

Concurrent with individual supervision provided by Thomas Reif, group supervision was led by Gary Stollak. Classes met two hours weekly, during which time video tapes were played of the student's interaction with his/her child. In addition, readings were periodically discussed.

An attempt was made to help the undergraduate understand both his/her own behavior and the behavior of the child. Theoretical issues and more phenomenological issues were both discussed in relation to understanding behavior. As with individual supervision, group supervision evolved from an initial didactic approach towards a concentration on understanding the relationship between student and child.

The Measurement of Student-Child Behavior

The entire training program consisted of 20 play sessions spread over six months. All play sessions were spaced one week apart, except that as a result of term breaks, five weeks elapsed between the 7th and 8th sessions, and two weeks elapsed between the 15th and 16th sessions. Four sessions, the 1st, 7th, 13th, and 20th were recorded on video tape, and the behaviors on the tape coded and systematically analyzed. With the exception of the first session, each of the video taped sessions represented the final play session of the term and the latter three sessions occurred 10-12 weeks apart.

The Coding of Student Behavior

The aim of the training procedures described was to help the student develop skills in effectively responding to children. The major emphasis was on the communication of understanding of the child in an atmosphere of acceptance, and on the utilization of effective controls when necessary. Drawing largely from the literature on client-centered play therapy, research in parent-child relationships, and the objective behavior categories developed by Moustakas, Sigel, and Schalock (1956) specific behavior categories were devised to assess the behavior

of the student. The specific categories, including definitions, are presented in Appendix A.

The Coding of Child Behavior

We were interested in measurement of effective psychosocial functioning in the child which included: (1) verbalizations reflecting an awareness and comprehrehension of one's own and others feelings, thoughts and behavior, (2) effective (coping) responses to situations, activities and internal feelings, and (3) responses associated with a rewarding interaction with another person. Specific behavior categories were derived from these areas of interest and were used to assess behavioral changes in the children. Definitions of the categories are presented in Appendix B.

The Procedure for Coding Behavior Categories

For both the student behavior categories and the children's behavior categories, the 20 minute play sessions were divided into one minute intervals. During each minute interval, more than one category could be scored but each category could be scored only once. Thus, for a given student or child behavior category, scores could range from 0-20 for each play session coded.

Training Assistants in the Coding Procedure

Two assistants coded each play session for student behavior and two other assistants coded the same play sessions for children's behavior. Rater's means for each category were used in the data analyses.

Unaware of the hypotheses of this study, the four assistants (trained separately) learned the categories to be scored. When it was felt that the assistants had become competent to code, ten video-taped sessions were coded by Reif and each assistant. For the student categories, percentage of agreement with the "expert" ranged from .65 to .99 with a mean agreement score of .81. For children's categories, percentage of agreement ranged from .55 to .87 with a mean of .70. Agree-

ment scores were considerably lower for the children's categories due to the frequent difficulty of hearing the child.

RESULTS AND DISCUSSION

Overview

The design of the study involved two training conditions (training vs. no training) sampled at four time periods (sessions 1, 7, 13, 20) and included the analysis of child and student dependent variables. Each dependent measure received a score from 0-20 during each play session indicating the frequency of occurrence by minute interval over a twenty minute play session. Because of the likelihood of initial individual differences, difference scores were used. These scores represented differences from the frequencies obtained in the first session, which were used in this study as a standard base rate. The procedure for statistical analysis of the dependent variables initially involved Pearson product moment intercorrelations of all dependent measures. An analysis of variance (2x3 with repeated measure on the latter factor; Winer, 1962) was then performed for each variable yielding F ratios for the main effect of training, for the main effect of time, and for the effects of interaction between the two. For variables with significant interaction effects, simple effects tests were performed. Variables with significant time main effects were subjected to the Newman-Keuls test of paired comparisons of mean differences.

Of the original 39 behavior categories (17 child and 22 student) 3 child and 5 student behaviors occured so infrequently during the play sessions that they were excluded from the statistical analyses; including the child behaviors: Affection, Statement of personal feelings in the context of reality, and Statement of personal feelings in the context of fantasy, and student behaviors: Setting limits with explanation, Setting limits without explanation, Statement of own emotion, Reflection of feelings, and Compliance unclarified. Each of these categories had total sums of less than 11 when summed over the 7th, 13th, and 20th play

sessions. In addition, the original scores for these categories in the first session had total sums of less than 10. The remaining 31 dependent measures occurred frequently enough to allow for meaningful statistical analyses to be performed.

Intercorrelations

Table 2 presents intercorrelations of a number of child dependent variables selected on the basis of inspection of all intercorrelations. Intercorrelations based on the raw scores of the latter three sessions (7th, 13th, and 20th) summed across both groups. All variables which were not presented were judged irrelevant in terms of their lack of significance and/or their unrelatedness to the patterns of intercorrelations found.

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insert Table 2 about here

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Inspection of this Table reveals that four fantasy variables, Statement of personal thought or behavior in the context of fantasy, Statement of Interpersonal awareness in the context of fantasy, Fantasy aggression, and Fantasy behavior were all significantly intercorrelated these variables are hereafter referred to as "Cluster 1".

Table 3 presents intercorrelations of selected student variables. The categories Reflection of verbal content, Reflection of motor behavior, Interpretation, Compliance clarified, Warmth, and Reciprocal participation in fantasy are all positively and significantly intercorrelated; these variables are hereafter referred to as "Cluster A". The categories Asking questions, Nonattention, Criticism, Rejection and Direction were all positively and significantly intercorrelated (hereafter referred to as "Cluster B"). Cluster A behaviors correlate negatively, and in most cases significantly, with Cluster B behaviors.

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insert Table 3 about here

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Table 4 presents intercorrelations of the child dependent measures with student measures just presented. The Table indicates several relationships between the child and the student clusters described: Child "Cluster 1" behaviors demonstrate consistently positive and frequently significant correlations with student "Cluster A" behaviors. Child "Cluster 1" also demonstrates consistently negative and frequently significant correlations with student "Cluster B" behaviors.

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insert Table 4 about here

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Results of Analyses of Variance

Main effects of training: "Cluster A"

Table 5 presents overall mean difference scores of those student variables associated with Cluster A. With the exception of the Warmth variable, all variables demonstrated significant training effects. In each case, as compared to the untrained students, the trainees engaged, overall, in significantly greater frequencies of Reflection of verbal content, Reflection of motor behavior, Interpretation, Compliance clarified, and Reciprocal participation in fantasy behavior.

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insert Table 5 about here

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Simple effects of training: "Cluster A"

The category of Warmth demonstrated a significant interaction effect in the analysis of variance. The simple effects test indicated that for the 13th and 20th sessions, but not for the 7th, the trainees demonstrated significantly greater degrees of Warmth than did the control students (13th session $F=4.41$, $p < .05$, 20th session, $F=4.18$, $p < .05$).

Simple effects of time-"Cluster A"

None of the behaviors associated with Cluster A demonstrated any significant time main effect. However, due to the presence of a significant interaction effect, the categories Warmth and Interpretation were analysed for the simple effects of time. Results indicated that within the training condition, the simple effects of time were significant for both variables (Warmth, $F=7.66$, $p < .01$; Interpretation, $F=14.89$, $p < .01$) Newman-Keuls tests for paired comparisons of mean differences between sessions indicated that the trainees were rated significantly greater in Warmth during the 13th and 20th sessions, when comparing either session to the 7th session. Also, the trainees engaged in more Interpretations in the 7th session. Also the trainees engaged in more Interpretations in the 7th and 13th sessions when comparing either to the frequency on the 20th session.

Main effects of training: "Cluster 1"

Table 6 presents the overall mean difference scores of "Cluster 1" variables. Scores are based on the average of difference scores obtained in the 7th, 13th, and 20th play sessions compared to the 1st session.

Overall mean difference scores demonstrated significant main effects for four of the five variables. Only the category Reality aggression yielded no significant training difference. The Table indicates that children seen by trainees, as compared to those who encountered untrained students, made significantly more Statements of interpersonal awareness in the context of fantasy, and engaged in significantly more Fantasy aggression and Fantasy behavior, in general.

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insert Table 6 about here

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Simple effects of training: "Cluster 1"

Since with the exception of the categories Fantasy aggression and Reality aggression, these "Cluster 1" variables also yielded a significant interaction in the analysis of variance, simple effects tests were performed. Results indicated that in the final play session, the simple effect of training was significant for all three variables. Clearly, in the final session the children seen by trainees emitted more Statements of personal thoughts of behavior and of interpersonal awareness, both in the context of fantasy, and engaged in significantly more Fantasy behavior, in general, than did the children who encountered untrained students. Thus the greater overall mean differences are attributable mainly to the final session. However, the simple effects test also indicated that for the category Fantasy behavior, the simple effect of training in the 7th session was also significant ($F=4.41$, $p < .05$). In addition, the simple effects of training for the category Fantasy behavior approached significance in the 13th session ($F=3.58$, $p < .07$).

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insert Table 7 about here

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Simple effects of time: Cluster 1

While there was no significant time main effect for any of the Cluster 1 variables the presence of a significant interaction warranted an analysis of the simple effect of time. Results indicated that for all three variables, the simple effect of time was significant within the trainee group and nonsignificant within the control group: Statement of personal thought or behavior in the context of fantasy ($F=3.71$, $p<.05$), Statement of interpersonal awareness in fantasy ($F=4.77$, $p<.01$).

Table 8 presents comparisons of mean differences within the trained group for the three Cluster 1 variables with significant simple effects of time, using the Newman-Keuls method. The comparisons clearly indicate that in the final session the children seen by trainees made significantly more Statements of personal thought or behavior in the context of fantasy, Statements of interpersonal awareness in fantasy, and engaged in significantly more Fantasy behavior, in general. The significant differences occurr for all three variables when comparing their mean differences in the final session with differences in either of the other two sessions.

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insert Table 8 about here

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The significant interaction, then, for each of the three Cluster 1 variables is a function of the final play session, when the trainee's children's fantasy behaviors showed significant increases, both with respect to time and with respect to training. That is, when comparing the children in the trainee's group's fantasy behaviors in the final session either with their frequencies in previous sessions, or with the control group's frequencies in the final session, significant differences were found.

Main effects of training-Cluster B

Table 9 presents overall mean difference scores of those student variables associated with Cluster B. The Table indicates that all of the behaviors demonstrated overall significant training differences. In each instance the trainees, overall, engaged in significantly less Questioning, Rejecting, Nonattentive, Critical, and Directive behaviors as compared to those in the control group.

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insert Table 9 about here

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Simple effects of training-Cluster B

Only one of the behaviors associated with Cluster B demonstrated any significant interaction effect-Ask question. Analysis of simple effects of training indicated that there was no significant difference between groups in the final play session, but that control students asked more questions in both the 7th and the 13th play session. Differences were so large in these sessions that a significant main effect occurred.

Simple effects of time-Cluster B

Analysis of the simple effects of time further indicated that within the trainee group, there was a significant increase in the frequency of questioning behavior in the final session, when comparing the frequency in that session with either the 7th or the 13th session.

Other Significant Differences

In addition to the behavior categories described above the following student variables also yielded significant differences in the analyses of variance: Give help, Initiating participation in fantasy behavior, and Genuineness. The first two behaviors yielded significant time and main effects, while the latter demonstrated a significant interaction ($F=5.72$, $p < .01$). The simple effects test

of training differences revealed no significant differences. However, the simple effects of time within the experimental group were significant ($F=4.17$, $p < .05$) and further analysis (Newman-Keuls) indicated that the trainee's rating of Genuineness was significantly greater in the 13th ($p < .05$) and 20th ($p < .05$) sessions when comparing either to the 7th session.

Content Analysis of Children's Fantasy Behavior

Table 10 represents a post hoc analysis of the thematic content of children's

fantasy behavior as it occurred in this study. Only the fantasy content of the children who received total fantasy scores of six or greater is listed, i.e,. only fantasy behavior which occurred over at least six of the twenty play sessions is considered.

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insert Table 10 about here

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An analysis of the fantasy content might suggest a crude differentiation in terms of levels of fantasy behavior, e.g., more simple, stereotyped responses representing a "low level" fantasy. For example, in Table 10 "C makes man out of clay, put man in house" (Session 1, Group T, Child G) or "C and S use animals to create a zoo" (Session 13, Group C, Child B). The more complex, nonstereotyped behaviors may be thought of as a "high level" fantasy, e.g., in Table 10 "C role plays mother; S role plays father, supper experience played out" (Session 7 Group T, Child E), or "C beats up big man (bobo doll) for depriving him of candy; C then gives halloween candy in apology to big man" (Session 7, Group T, Child I). The "higher levels" of fantasy may involve more complex behaviors such as adult role behaviors, affective expression, interpersonal awareness, and the symbolic expression of conflict. The lower levels of fantasy may involve cognitive and motor behavior which remains closely associated with the objects and activities involved, and involve relatively little mastery striving.

Fantasy behavior was also able to be differentiated in terms of reference to objects, e.g., (Session 1, Group T, Child I), animals, e.g., (Session 1, Group T, Child B) the self, e.g., (Session 20, Group T, Child G), or others, e.g., (Session 20, Group T, Child C).

If one examines Table 10 irrespective of the differing frequencies of fantasy behavior between groups, it seems that the thematic content of the children seen by trainees generally involved "higher levels" of fantasy and more often contained references to interpersonal situations. There appeared to be a "clinical richness" of fantasy behavior of the children seen by trainees which is not apparent in the

control group's fantasies.

Clinically, the former children's fantasies appear frequently to involve problems of emotional integration and concerns with identification and role behavior. Problems of emotional integration are exemplified by Child A, whose fantasy behavior continually involved aggression and who progressively found its more appropriate expression; Child B, whose role reversal fantasies appeared to be an attempt to resolve issues dealing with a punitive mother who had deprived her of a relationship with her father. In reality, the child's parents were divorced and she never saw her father; Child D, whose doctor fantasies appeared to reflect his immediate concern with his recovery from rheumatic fever; he was still required to have weekly injections; and Child I, whose fantasies dealt with aggression to and from an adult. According to the student the child was having conflicts with his father and was frequently physically punished.

Secondly, concerns with identification and adult role behavior seemed to be exemplified by the many instances of role play fantasies in which the children either engaged in role reversals, e.g., "You be the father and I'll be the mother" or had the student adopt the adult role behavior, e.g.,as in telephone conversations.

While it is not implied that these two concerns-problems of emotional integration and concerns with identification-were not evident in the behavior of the control children, it is notable that of the 13 instances of fantasy behavior in the control group, only 4 appeared to reflect these issues (3 times with Child E and 1 time with Child D).

The trainee group's children's overall significantly greater increments in Statement of personal thought or behavior in fantasy, Statement of interpersonal awareness in fantasy and Fantasy aggression appear to be associated with the thematic content of the fantasies. That is, in expressing problems of emotional integration and concerns with identification through fantasy, the children made frequent references to themselves and other people, and expressed a great deal of

negative effect through aggressive behavior.

Thus, with respect to the content of children's fantasies, on the basis of post hoc analysis, the findings are consistent with previous clinical assumptions. That is, the expression of intrapersonal and interpersonal concern though the vehicle of fantasy reflects a process of achieving ego mastery. Overall, the experimental children demonstrated significantly greater increments in the expression of fantasy. Can we assume these increments reflect some facet of psychosocial maturation?

Fantasy aggression

Part of the overall training differences in fantasy behavior was attributed to differences in Fantasy aggression.

Most globally, it seems plausible to attribute the incidence of Fantasy aggression in the trainee group children to the process of achieving ego mastery discussed above. Specifically, the expression of aggression in fantasy may be related to the problems of emotional integration which were referred to above.

Most of the behaviors categorized as Fantasy aggression involved gross motor activity e.g., throwing things, punching inflatable bags, and shooting darts at imagined people. Considering Fantasy aggression as one form of gross motor activity and the category Excitement as another, it might be suggested that the two groups of children differed in this dimension. It may be that Excitement, e.g., giggling, screaming, and squirming reflected an unorganized expression of affect, whereas the motor forms of aggression reflected a somewhat greater degree of organization. Again, this issue is open to speculation. Clearly, however, the control children showed overall significantly greater increments in Excitement behavior, whereas the trainee group children were engaged in significantly more Fantasy aggression.

The Relationship Between Student and Child Behavior Differences

The results of the present study are consistent with some of the findings in

the area of doll play research. Several studies have attempted to manipulate levels of experimenter interaction and determine the effects on various behaviors, especially aggressive and nonstereotyped behavior.

Pintler (1945) manipulated the quality of experimenter interaction and measured the frequencies of several behaviors, including aggression, over two half hour sessions. Two conditions of experimenter interaction-"high levels" and "low levels" were implemented. High levels consisted of frequent attention to and interest in the child's play. Low levels consisted of a minimal amount of interaction with the child. Pinler found that high levels of interaction were associated with increased fantasy aggression. While the distinction between the high and low levels of interaction are not necessarily similar to the permissive-restrictive dichotomy used in this study, the Pintler study demonstrated the importance of adult behavior in a play session in determining the amount of fantasy aggressive behavior of the child.

Siegel (1957) indirectly investigated the effects of permissiveness on aggressive behavior in a doll play setting. In this study it was observed that aggression decreased from session to session in the absence of an adult suggesting "that the presence of a permissive adult may have a cumulatively facilitating or release effect on children's aggression."

In a more sophisticated design, Siegel and Kohn (1959) replicated these findings. They compared an adult present condition with an adult absent condition over two sessions and found a significant increase in the adult present condition and a significant decrease in the adult absent condition. Children in this study were aged 4-7, similar to the ages of children in the present study.

The implication of their findings is that "adult permissiveness must be conceived in more positive terms than simply reducing S's fear of punishment." The authors suggest that in the permissive condition, the child "could get a flow of support from the existence of an accepting authority figure and the perception of rules and regulations consonant with their behavior" (Siegel and Kohn, 1959,

p. 139). Their findings suggest that permissiveness constitutes a facilitating condition.

The distinction between stereotyped and nonstereotyped behavior in doll play is similar to the distinction between fantasy and reality made in this study. In a study described above, Pintler (1945) found high levels of experimenter interaction to be associated with increased nonstereotyped behavior. Bach (1945), Phillips (1945) and Yarrow (1948) found that the amount of stereotypy decreases from session. Holoway's (1949) study of 3-5 year olds in therapy indicated that at the end of therapy children play more realistically using less fantasy behaviors. Levin and Wardell (1962) suggest that "the relaxation of restraints in the second session (of doll play) which yields more aggression may also lead to more nonstereotyped and nonaggressive behaviors (p. 45)". In Becker's (1964) general review of the permissive-restrictive dimension of parental behavior, mention is made of the findings in doll play research:

> ... the experimental research on the effects of permissiveness (indicates)... when a child's behavior is measured over a series of experimental sessions under warm, permissive interaction conditions, a general increase in a variety of response patterns is found. Such results are consistent with the common sense notion that permissiveness serves as a generalized reinforcer for a wide range of responses, just as restrictive attitudes appear to have a generalized inhibitory effect (p. 198).

The studies from which the above generalization comes (Sears, 1951, Yarrow, 1948, Hollenberg and Sperry, 1951) all used a small number of sessions and relatively undefined experimenter behavior (all studies used Pintler's "high level of interaction").

The findings of the present study offer support to Becker's conclusion on the basis of somewhat different methodology, i.e., a greater number of play sessions and more clearly defined behavior variables. The association between permissive adult behaviors in a playroom setting and the expression of fantasy behavior in general (and fantasy aggression in particular) is reiterated in the current findings. In addition, the facilitating nature of adult permissiveness appears to

be suggested by the theoretical association between fantasy behaviors and the problem solving process. Ginott's (1965) definition of permissiveness as "the acceptance of imaginary and symbolic behavior" (p.62) is strikingly relevant to the findings of this study.

Explanations for the associations between permissiveness and fantasy are based on speculation. In a review of the motivational aspects of play, Klinger (1969) suggests that fantasy can be viewed as a response associated with the absence of "compelling external stimulation". The effect of this absence may be a decrease in the arousal level of the individual, and fantasy may be a response aimed at reinstating an optimal level of arousal. Our results are not in conflict with this notion either. Specifically, the permissive-restrictive dichotomy, i.e., the different degrees of exerting control over the child, may be seen as consisting of different degrees of "compelling external stimulation". Children's fantasy behavior may in turn be viewed as a response to the relative absence of such stimulation. The children encountering a permissive adult may become more responsive to their own needs and internal states than to the needs and behaviors of the adult.

The shift of attention away from sources of external stimulation may have occurred as a result of a change in perception about the permission for determining one's own actions. Specifically, the child whose stimulations are received by the adult with acceptance may begin to perceive himself as having a wide range of latitude in behaviors which s/he chooses to emit. It would seem logical therefore that s/he would choose those behaviors which would be most gratifying in the sense of satisfying drives or wishes. S/he also may choose to engage in symbolic behavior aimed at the elimination of anxiety. In a restrictive atmosphere the child may quickly perceive his/her behaviors as eliciting a wide range of approval and disapproval responses. Given the narrower range of responses approved by the student, the chances of the child emitting personally meaningful and gratifying behavior might be less. One of the restrictions which the control students

placed on their children may have been in the areas of fantasy and aggressive behavior, a phenomenon which does not appear to be too surprising.

The implication is, however, that the permissive behavior of the trained student facilitated the expression of those child behaviors which were personally meaningful and relevant to an attempt to increase their effective psychosocial functioning. Furthermore, it may be that the trained students engaged their children in an educative process, perhaps changing the child's perception of the locus of control of behavior from initially being vested within the student to eventually occurring within the child.

The shift from attention to compelling sources of external stimulation to internal processes may also account for the differences in children's social behaviors. That is, a decrease in concern with external demands may be associated with an increase in nonresponsiveness to other stimulations such as reflections and interpretations.

The results of this study were encouraging. We found that "normal" children who encountered trained and supervised undergraduates increased their expression of behaviors, especially fantasy, which we would consider indicative of greater maturity, coping and adaptation. We were sufficiently encouraged to study the changes in behavior of trained and untrained undergraduates and the clinic-referred young children they encounter over fifteen play sessions.

Method

Similar to the previous study an advertisement was placed in the university newspaper asking for sophomore and junior level volunteers who were interested in learning about and practicing techniques that would increase their sensitivity and ability to communicate with young children. The necessity of their making a two-year commitment to the program was emphasized. Approximately 400 students attended meetings and completed three inventories; the Parent Attitude Research Instrument (Schaefer & Bell, 1958), a Sensitivity to Children projective question-

aire, developed by Stollak, Scholom, Kallman, and Saturansky, (1973) and a personality questionnaire designed to assess "mental Health".

All students were informed that their scores on the inventories would be used to select participants. The undergraduates were told that some of them would be offered the opportunity to meet weekly with a clinic-referred child and receive group and individual supervision in play techniques, while other students would be offered the opportunity to play with a clinic-referred child but would not receive training or supervision for the first fifteen sessions.

Characteristics of Students: "High" or "Low" Potential

From the large number of interested undergraduates the males and females who scored "highest" (i.e., had more "child-oriented," "liberal" values and attitudes; were better able to communicate understanding and acceptance of children's needs and feelings; and presented themselves as being within the "average" range on various psychological dimensions) were designated High Potential Students (HPS's) and the male and female subjects who scored "lowest" were designated as Low Potential Subjects (LPS's). HPS's and LPS's were randomly chosen from this pool and comprised the experimental group (trainees) and the remaining HPS's and LPS's conprised the control or untrained groups. The groups included approximately equal numbers of females and males.

Control group Activities

Each of the control group students was informed 1) of the random selection process, 2) of the necessity and importance of a control condition to evaluate the effects of training and supervision, or their lack, on his/her and the child's behavior, (3) that the next step would be our calling him/her when we had a clinic-referred child for him/her to meet with, (4) that at the end of the experiment, s/he would be permitted, if s/he wished, to participate in a course of training similar to that received by the experimental group students and (5) that until the conclusion of the study s/he would receive neither training nor supervision. S/he was further told that s/he would be observed playing with the child through

a one-way mirror, each and every session, to insure that neither s/he nor the child were "destructive" to each other. If such occurred his/her contact with the child would be terminated. S/he was also given a list of books on play therapy to read if s/he wished, but again, we would not discuss the material with him/her.

The Trainee Group Activities

The trainees were randomly assigned to groups consisting of six or seven trainees each, with approximately equal numbers of HPS's and LPS's (males and females) in each group. Each group met two hours weekly during the course of the project.

During the first meeting of all groups, the trainees were informed that they were to begin one-half hour weekly play with a "normal" child as quickly as possible and that they would be responsible for finding the child. Each of them received several letters of introduction to parents that they could use. The majority of students played in or near the child's home and a minority in one of our two clinic playrooms.

The group meetings were devoted to a discussion of play interaction and principles of client-centered play. As in the previous study, readings from the work of Axline (1969) and Moustakas (1959) were primary sources for discussions. The groups discussed the details of interaction in such books as Axline's (1964) Dibs, including the rationale for the adult's actions in such material. Their own doubts, fears, and concerns about their acting in a client-centered manner was also discussed. Extensive use was made of role playing and examples and possible problems they would encounter with children were also discussed. Each student was video-taped playing with his/her child and this material also became the focus of group discussions. Throughout all these discussions, a major focus was on the importance of empathy, and the possible effects of the adult's actions on the emotions and actions of the child. It was planned that all the trainees would continue to see their "normal" child until they were assigned to a clinic-

referred child, which was to be approximately fifteen weeks into the school year.

While training was progressing, referrals were being made to the MSU Psychological Clinic. An intake interview was conducted by the clinic staff. If they felt that a problem existed and that more than assessment seemed likely, the case was assigned and comprehensively evaluated. It was decided that if the evaluation indicated that (a) behavioral problems did exist, (b) the child had an IQ within the average range, (c) the problems did not involve any neurological impairment, (d) the child was not psychotic, and that (e) neither of the parents were psychotic, or suicidal or homicidal risks, then the recommendation would be for the child engaging in fifteen sessions of play interaction (at no fee) with another "therapist in training" who would be observed. The parents were told that the fifteen sessions were seen mainly as a continuing assessment of their child's conflict and need expression, and as possibly beneficial due to the special kind of individual attention provided. After the completion of the fifteenth session, another evaluation similar to the one previously completed would be conducted to assess whether any changes had occurred. We would integrate these findings with what was observed during the play sessions, and the results and new recommendations communicated to the parents. The parents were not informed of the characteristics of the undergraduates.

When the recommendation for play sessions was accepted, a trainee or control group subject was randomly chosen, called, and a time convenient for him or her, and the parents to bring the child to the clinic was determined. All sessions were observed through a one-way mirror, and the first and every fifth session was video-taped. With the trainees (who were, again, also participating in weekly group meetings) immediate supervision and feedback concerning performance was given. The untrained subjects did not receive any supervision or feedback except for general encouragement and, when needed, sympathy. Over the three years of the project, only one undergraduate-child pairing had to be terminated.

Number of cases

The results to be presented consists of the data and information collected and analyzed on 36 cases. See Table 11 for breakdown by sessions and groups of the 36 cases.

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insert Table 11 about here

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Characteristics of cases

There was nothing in the evaluation of the socio-economic, educational and job backgrounds of the families of the children to indicate that this sample of cases was not typical of families seen in child guidance clinics (including the 4-1 ratio of male to female children; (see, e.g., Love, Kaswan and Zugental;1972)The groups included children of single mothers on welfare, children of large families where both parents worked at blue-collar jobs, and single children of parents who held professional and managerial positions.

Student Behavior

The training program focused on increasing empathic behavior on the part of the trainees during play sessions. In this study, empathic behavior, following the Rogerian concept of conveying full acceptance and understanding of feeling, was operationally defined using three scales developed by Stover, Guerney and O'Connell (1970) and used in Guerney's analysis of the effects of training in filial therapy (Guerney and Stover, 1971). The first of these, Communication of Acceptance is considered to be one of the necessary conditions for therapeutic personality change (Rogers, 1957). A second scale, Allowing the Child Self-Direction is a measure of behavioral willingness on the part of the adult to follow the child's lead. Involvement, the third scale, is a measure of the adult's attention to and participation in the child's activities. (See Appendix C for scales)

Each of the three scales was coded every two minutes during each 30 minute

tape. To obtain the score for each scale, the mean across each two minute rating period was calculated for each variable. Guerney et al., found that the Communication of acceptance scale correlated significantly with both Allowing self-direction and Involvement, but the correlations were only moderate in degree, indicating that it was reasonable to examine the scales separately. Each adult in the present study was rated during each of the 4 video-taped sessions on all three scales. The scores for each adult were then rank ordered for each session and the median score for each variable was determined. Adults who scored at or below the determined median were defined as more involved, allowing of more self-direction and/or communicating more acceptance on that variable for that session. Those who scored above the median were considered to be the reverse. The subject's mode of responding in the majority of the sessions was used for the purpose of the analysis. It was possible, for example, for a person to achieve high scores on Communication of acceptance and low scores on Involvement and Allowing self-direction. Once it was determined how a person reacted over all sessions his child's mean fantasy scores were determined using all sessions that s/he had that "majority" score. The other scores were not used in this analysis.

An example can best outline the way the scores were derived. Subject 1 communicated acceptance for all sessions. The scores for the analysis would be the mean of his child's fantasy scores in all sessions. He allowed self-direction in sessions 1,2 and 3 but he did not in session 4. Session 4 would not contribute to the fantasy mean score across sessions. He was involved for sessions 1 and 2 and uninvolved in sessions 3 and 4. His child could not be used as a subject in the involvement analysis of variance because he had no "majority" score for involvement. This procedure was rationalized on the following basis. The purpose of the analysis of variance was to get an overall picture of the effects of the independent variables. Because of the small sample size, if subjects who were "accepting" in the majority of sessions but not in all were not used in the analysis, there would have been considerably fewer subjects in the analysis. Had

there been more subjects, it would have been preferable to use only subjects with consistent scoresover all four sessions. A larger sample would have also permitted a session by session analysis. Unfortunately, neither was possible; so the "majority" score approximates the score that was observed for each subject over all the sessions.

Undergraduate coders were uninformed of the nature of the research, the characteristics of the adults in the videotapes, or the session number they were observing. The pre-coding reliability measures were based on scores of five raters, independently rating three half-hour videotapes of undergraduate play interaction obtained in other projects, after a four hour training period, with an experimenter designated as "expert". The post-coding reliability measures were based on the scores of the three raters on selected videotapes who were still available at the compared to the "expert's" ratings. Mean agreement with expert across pre and post-coding and across the three categories ranged from 86.3% to 93.8%.

Measurement of Child Behavior

Fantasy Measures

The measures included frequency counts and rating scales. Each of the scale ratings are described below. With two exceptions each scale ranged from one to five, with five representing the "high" or "positive" end of the scale. The rater scored for each scale during each 30 seconds of each videotape.

1. Transcendent behavior: (see Gottlieb, 1973; Pulaski, 1973) This consisted of a count of the number of imaginary items supplied by the child, as opposed to what had already been supplied in a given stimulus situation. For example, identifying family members in a doll situation received no credit, since this was obvious in the dolls themselves. If, however, the child volunteered that the father "was going to work in New York City," s/he was given credit for two imaginary items: 1) going to work, 2) in New York City. Anything said by the dolls or any feelings or activities ascribed to them were scored and summed.

Each detail supplied by the child was counted whether mentioned by him/her or not. If, for example, s/he molded a dinosaur out of clay, s/he was given credit for a spiked back, short arms and a long tail as each of these appeared, whether s/he mentioned them or not. If s/he played with the dinosaur, s/he received no further credit, but if s/he said the dinosaur was walking in the forest s/he received two points. Any further mention of the forest received no further credit, as each item was scored only once in order not to confuse verbal productivity with imagination.

Many expressive noises also were scored if the observers agreed to their meaning. Police siren noises contributed to a story of a car crashing as did the wedding march hummed while playing with a bride doll. The motions of walking in space by children in astronaut costumes were also scored.

2. Divergent thinking: (see Guilford, 1967; Hudson, 1966) This consisted of a count of the number of times a child changed the character of a toy to represent other persons or toys or used a few plastic toys to represent other persons or toys. For example, a child using a bobo doll to be his/her baby brother scored a point.

3. Scope of Fantasy Scale: This consisted of a rating of the child's ability to deal with the fantastic aspects of make-believe, fairies, witches, life on another planet, etc., as opposed to the reality of the child's everday experience. The various steps in the rating scale are described by Pulaski (1973) as follows:

0 Anything likely to be part of the child's daily experience: e.g., Christmas trees, Indian headdress. Events with a high probability of having been experienced directly such as getting gas, going to the circus.

1 That which exists in reality, but most likely has been experienced only indirectly through conversation, books, or television, e.g., knowledge of the solar system, stories of dinosaurs, castles, outer space.

2 That which exists largely in the emotion: silly aggressive fantasies of the television, cartoon type; emotional fantasies; fantasies verging on the

bizarre, e.g., mother puts the baby in the toilet, hangs him/her on the the clothes line to dry.

3 Fantasy that gives a new twist to familiar realities: e.g., an umbrella is used as an air conditioner; a "junk jewelry" chain becomes a pair of handcuffs.

4 Addition of fantasy details to a reality stimulus: e.g., a snowman is magically able to talk and grants three wishes. The story centers around the real stimulus, but adds fantasy details.

5 Addition of fantasy events to a reality stimulus: e.g., the diver doll becomes a "fantastic hero" who had adventures moving away in time and space from the immediate situation. The fantasied events take precedence over the original stimulus.

4. Concentration: This was designed to show how quickly the child settled down to play, how deeply absorbed s/he became, and how much exploration or tangential behavior s/he exhibited. It was not a direct rating of fantasy per se. Ratings ranged from 1, for brief or little interest in play with many questions and quick responses to irrelevant noises (e.g., the chimes of the bell tower) to 5, for deep absorption in play and extended activity with one toy. The definitions for each point of the scale as described by Freyberg (1973) follow:

Concentration

1. Shows brief or little attention to or absorption in activities; aimless wandering, high distractibility, many questions to adult; responding to noises outside room. Hyperactivity with no real interaction with play material.

2. Engages in superficial play with toys and play material while looking around the room, staring passively, talking to adult, or wandering aimlessly. Changes toys and/or activities frequently.

3. Responds with moderate interest to the toys or play activities. Changes activities only once during the 30 sec. segment. Some distractibility, and no real loss of self in the play situation. Some response to outside stimuli such as noises and the talk of people outside room.

4. Shows good absorption in play activity; very little response to outside stimuli, no change of activity during 30 sec. segment; no tangential

behavior or conversation pertaining to activities other than the one at hand.

5. Shows intense absorption in play activity; stays with one activity for a long period of time; oblivious to outside stimuli, may not even respond to direct questions.

5. Affect and Mood: Each child's affective reactions were judged by his/her verbal and/or nonverbal behaviors. The ratings ranged from 1, for interested behavior, to 5, for eager enjoyment of the fantasy, shown by laughter, singing, and reluctance to discontinue the fantasy. The definitions of the five points of Freyberg's (1973) affect scale follow:

Affect

(Note that mild surprise, interest, and joy are viewed as positive affects and scored high).

1. Shows no interest or pleasure in the toys or play activities; much tangential behavior, conversations with adult; critical remarks about toys or play activities; no smiling, laughter, or evidence of pleasure in playing.

2. Shows only mild pleasure and interest in toys or play activities; much looking around and/or desultory manipulation of play material. Occasional smiling or laughter.

3. Shows moderate interest, pleasure and enjoyment of activities and toys; talking freely about the play activities; somewhat lost in quiet enjoyment, considerable smiling and/or laughter during activites; some animation.

4. Shows deep pleasure and interest in play activity, smiling or laughing frequently. Expresses frequent pleasure, describing spontaneously or acting out fantasies in play.

5. Shows extreme delight in play; laughing, singing, smiling; thoroughly enjoying self in play, reluctant to leave play situation.

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insert Figure 1 about here

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6. Identification; Based on speculations by Gould (1973), the child's ability to identify with the provider/protector as opposed to his identification with the aggressor was rated. For example, a child who plays the role of a mother who is always angry at her baby or hitting her because she doesn't listen was rated as indentifying with the aggressor. A child who fantasized soothing a child who has

been punished was rated as identifying with the protector/provider.

7. Fluctuating certainty: This rating, also based on the speculations of Gould (1973), consisted of an evaluation of the child's ability to distinquish real from pretend danger. It included (1) differentiation in the fantasy between the danger in the fantasy and a real threat to him or her, and (2) breaking out of fantasy because of present "danger". For example, Gould (1973) noted a child who took the position of director assigning roles to several girls. She said "And you'll be the bad child." The other child said angrily, "I am not bad." She was unable to separate bad in fantasy from bad in reality so she had to break out of the fantasy.

8. Superego Constancy: This saale, also based on Gould's (1973) work, consisted of an evaluation of the intensity of the child's blame, shame, guilt or apologetic reactions to the predicaments of his fantasy characters. It ranged from (1) high intensity of blame after transgression to (3) no blame after transgression. For example, a child who creates an imaginary character with a puppet who says things like "you mustn't do that" or "try to eat nicely so you won't be scolded," exhibits high intensity of blame. A child who creates an imaginary character who says "watch out so you don't hurt yourself" shows a low degree of blame.

9. Wish fulfillment vs. replicative fantasies: This scale by Levin & Wardwell (1962) counted the number of wish fulfillment as opposed to replicative fantasies. In order to decide whether a fantasy is wish fulfilling it must meet four criteria: a) some restraints in real life against the expression of behavior in question, b) a desire for such expression, c) little overt manifestation of the behavior and d) the appearance of the behavior in fantasy. Guides in making the distinction between wish fulfillment and replication fantasies included:

a) examine the sequence of events rather than simple unit, e.g., the father spanks the boy and the boy hits the father, is more likely to be wish fulfilling than the father spanks the boy and the boy cries. If the unit

(father spanks the boy) were analysed alone it would be impossible to tell whether it was a wish fulfillment or replication.

b) tangential behavior which interrupts the fantasy, such as looking out the window or talking about something apparently unrelated to the fantasy, may indicate boredom, lack of imagination or anxiety about some impulse which is at the threshold of experience.

c) use of prior knowledge about the child to verify wish fulfillment vs. replication, e.g., what has actually happened to the child before the fantasy.

10. Human and animal references: Based on speculation by Gondor (1964), this consisted of the number of human, animal and/or object references in each 30 second play segment.

Procedure for Coding Fantasy Behavior

Five sets of two coders each coded the child's behavior. Each coder worked with another. Rater's means for each category were used in the data analyses.

Reliability of the Fantasy Rating Scales

Table 12 represents the average correlations of the mean scores of all coders over the four sessions. The scores are based on the scores of 10 coders, independently rating the videotapes on the variables assigned to them. Each coder was compared with each other coder to get the inter-coder reliability..

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insert Table 12 about here

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The range for the average correlations was 0.02 to .87. This indicated a great range in reliability. The large majority of the scales showed sufficient reliability ($p < .05$) to be included in the subsequent analyses. The Fluctuating certainty scale was dropped because of insufficient reliability.

RESULTS

Analyses of changes in undergraduate behavior and outcome effects of the play encounters can be found in another report (Stollak, Scholom, Green, Schrieber and Messe', 1975).

The results reported below focus only on the analyses of the interrelationships among adult and child behaviors, especially, over time, conducted by Gershowitz.

Statistical Analyses-Overview

Three (one for each adult category) 2 (high versus low on each of the adult categories) x 2 (trained-untrained) x 2 (high potential-low potential) x 20 (fantasy, affect and mood measures) analyses of variance with unequal cell frequencies were computed. A least squares solution was used to adjust for unequal cell frequencies. Had the loss of data been random (in no way related to experimental variables) an unweighted analysis would have been used. Since in this study there may have been decreased cell frequencies related to their decreased relative occurrence in the population, least squares was the most appropriate solution.

Because of the small sample size, and possibly because of their slight appearance in the population, there was only one subject in the categories of: 1) highly Involved, high on Allowing self-direction, high Acceptance, low potential, untrained, and 2) low Involved, low on Allowing self-direction, low on Acceptance, high potential, trained.

As noted previously, it was possible, as a result of the median split, for a subject to be high on any of the 3 variables in one session and not in another. As a result of the above it was not possible to carry out individual session by session analyses of variance. See Table 13 for cell frequencies. An overall analysis was all that was possible. A mean score was determined for each subject over all the sessions.

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insert Table 13 about here

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Once each subject's mean scores for all the dependent measures were computed, three multivariate analyses of variance were performed, one for Involvement, one for Allowing self-direction and one for Communication of acceptance, taken separately. These were examined for significant main effects on the above categories and for potential and training effects. When there were interaction effects, simple effects tests were carried out to further clarify the data. Furthermore, a cross-lagged panel correlational analysis evaluated the effect of a subject's behavior in one session as it may have caused behavior in later sessions.

Involvement x Training x Potential ANOVA

Table 14 presents a summary of the results of the Involvement x Training x Potential multivariate ANOVA. The mulitvariate effect of Training was significant. Children who encountered adults who were trained engaged in more fantasy activity, in general, than those who encountered untrained adults. To examine what specific fantasy variables were most affected, univariate analyses were performed. There was a significant effect for the Divergence scale ($F=21.56$, $p < .002$). There was a significant effect for Ashamed-Contrite scale ($F=8.26$, $p < .008$) and Wish Fulfillment vs. Replication ($F=8.2$, $p < .0085$). Trained adults, thus interacted with children to produce significantly more divergent responses than untrained adults. The children also produced more replication rather than wish fulfillment fantasies. More positive and negative moods were elicited by trained adults, but only the ashamed mood occurred significantly more frequently with the more trained adults. The rest of the mood differences on the training variable were in the predicted direction but none was sufficiently large to be considered significant.

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insert Table 14 about here

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Effects of Training and Potential

It was expected that adults who had high potential and were trained would elicit more positive fantasy behavior in the children than would low potential, untrained adults.

There was a significant multivariate Potential x Training interaction (see Table 14). Several univariate tests were significant: Divergence ($F=29.45$, $p<.0002$), Elated ($F=12.84$, $p<.0015$), Sad ($F=41.71$, $p<.0001$), Ashamed-Contrite ($F=14.95$, $p<.0008$) and Fatigued ($F=9.46$, $p<.0052$). The means are summarized in Table 15. To clarify further these results, simple effects analyses were performed.

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Insert Table 15 about here

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For Elated under the condition of Training there were significant differences for Potential in the Training group ($F=8.02$, $p<.01$). For Ashamed there were significant differences for Potential, again in the Trained group ($F=4.36$, $p<.05$). None of the other simple effects were significant. Thus, HPS's who were trained to be involved with the child elicited significantly more affective activity in the children they encountered than the trained LPS's.

Involvement x Potential x Training Interaction

There was a significant multivariate Involvement x Potential x Training interaction (see Table 14). Accordingly univariate tests were performed. Divergence ($F=29.45$, $p<.0001$), Concentration ($F=15.60$, $p<.0006$) and Human References ($F=12.41$, $p<.0018$ yielded significant differences. The means of these scales are summarized in Table 16. Simple effects analyses were necessary to clarify further the data. It was decided to examine the effects

of Involvement and Training under each condition of Potential. It was expected that Training and Involvement would affect fantasy behavior more than Potential. Unfortunately, in the condition of Trained, low Involvement there was only one person. That person's score seemed to account for much of the significance. Conclusions therefore must be made very hesitantly. Since the other cells had no more than seven people either, inferences can still be drawn, however tentative. If all the other cells had 50 subjects, for example, no inferences could be made. In the present case, even if the cell with one person had 4 people (to make it more equal to the other cells) there would still have been significant results. This is beaause the mean of the cell with one person was so different from the others, even if three more people with means in the same range as the other cells were added, the difference would have still probably been significant.

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insert Table 16 about here

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On the Divergence scale there were significant differences for Training ($F=98.65$, $p<.01$), Involvement ($F=79.4$, $p<.01$) under the High Potential cognition. Further analysis revealed a significant difference in Involvement under the codition of Training ($F=14.1$, $p<.01$). This suggests that if a child showed Divergent behavior, s/he played with an adult who was trained and involved. There were no significant differences in Involvement for the untrained subjects. If s/he was untrained, his/her potential did not make him/her more involved. There was no difference for the LPS's suggesting that training "low potential" persons would have little effect on encouraging fantasy.

On the Concentration scale, there were significant differences for Training ($F=3.60$, $p<.05$), Involvement ($F=3.51$, $p<.05$) and Training x Involvement interaction ($F=9.67$, $p<.01$) under the High Potential condition.

Further analysis revealed a significant difference in Involvement under the codition of Trainigg ($F=12.41$, $p < .01$). If a person had High Potential and was trained, s/he helped the child Concantrate more when s/he was more Involved with the child. Under the condition of Low Potential there was also a significant Training x Involvement interaction ($F=13.36$, $p < .01$). In this case it was under the coddition of lack of training that there was a significant difference ($F=5.71$, $p < 01$).

Perhaps when an adult is "Low Potential" to begin with, training will result in mainly concentrating on reality-oriented tasks more than when such persons are not trained. Since the LPS's who were untrained were more involved, the child contentrated more on what s/he was doing. Training increased involvement, but in LPS's, increased involvement only led to increases in concentration, whereas training of HPS's led to increased in some of the fantasy activities of the child.

For the Human References scale, for HPS's, there were significant differences for Training ($F= 13.57$, $p < .01$), Involvement ($F=18.97$, $p < .01$) and Training x Involvement interaction ($F=14.77$, $p < .01$). Further analyses revealed a significant difference for Involvement in the Trained group ($F= 33.61$, $p < .01$). Trained and Involved adults elicit one of the more important measures of a highly developed, mature fantasy life in the child. It seems that this could be a result of more involvement in the child's fantasy activity. Perhaps the increased human contact in this condition produces more human responses.

Allowing Self-direction x Training x Potential ANOVA

Table 17 summarizes Allowing Self-direction x Training x Potential multivariate ANOVA. There was a significant three way interaction. Univariate analysis revealed that this could be accounted for mostly by a highly significant difference on the Divergence scale ($F=40.41$, $p < .0001$). Holding Potential constant, simple effects tests revealed a significant Training ($F=38.04$, p .01), Allowing Self-direction ($F=97.52$, p .01 and Training x Allowing Self-direction interaction ($F=75.60$, $p < .01$) under the High Potential condition.

Further analysis revealed a significant Allowing Self-direction effect under the condition of no training (F=169.18, p .01). There were no effects in the trained group or in the low potential interaction. Children engaged in more divergent behavior with HPS's who were not trained than with LPS's who were trained.

Communication of acceptance x Training x Potential ANOVA

This analysis revealed no significant results. Apparently, communicating acceptance is not as important within the first 15 sessions in stimulating the child's fantasy life as the delicate balance between being involved in the child's fantasies but at the same time allowing the child to take the lead in developing them.

Analysis of Variance Summary

The great majority of findings support the hypotheses that involvement is the measure of adult sensitivity that is most related to fantasy output in children. In particular, involvement seems to have the most pervasive effect on the child's divergent thought processes. Adults who are espeaially "high potential " and were more involved with children, were more successful in encouraging them to think divergently and express more replicative than wish fulfilling fantasies, thus helping the child express,theoretically,more mature, developmentally-advanced fantasies. When such adults allowed high levels of Allowing self-direction there were also more human references in the children's fantasies; another indication of maturity. Furthermore, HPS's who were trained elicited overall the most affect and mood states .

Cross-Lagged Panel Correlational Analysis

Each subject was to be taped over four sessions. Because of breakdown of equipment, this was not always possible. Thus, it was not possible to do single session analyses of variance of the data. In order to glean some information about the session by session changes in the child's fantasy behavior, a cross-lagged panel correlational analysis was conducted. Six panels were

needed to compare sessions 1-6, 1-11, 1-15, 6-11, 6-15, 11-15. After the underlying assumption of stationarity was met and if variable 1 at time 1 with variable 2 at time 2 was correlated more highly than the reverse, this was considered as evidence that variable 1 was a predominant cause of variable 2. The rationale for the cross-lagged panel correlational procedure is found in Crano, Kenny & Campbell (1972). If, in addition, variable 1 at time 1 with variable 2 at time 3 had a higher correlation than the reverse, there was stronger evidence for causation. If the pattern occurred in at least 3 of the 6 panels for the purposes of this study there was a very strong likelihood of causation.

Results of such an analysis indicated that Involvement seemed to be causally predominant regarding the other behaviors. In particular, it "caused" Allowing self-direction in three of the six panels and Allowing self-direction, in turn resulted in increases in Communination of acceptance. Apparently, the adult must initially get involved with the child before s/he will let the child take the lead in the fantasy. High levels of Allowing self-direction increased animal and object references which in turn, resulted in increased Concentration and expression of affect. Object references led to transcendent behavior and lively affect which was followed by increased in replicative fantasies.

Other findings suggested that moods of fear and shame also led to increases in object references. Increases in object references also led to more human responses.

To summarize, these analyses strongly suggest that adult involvement is central in the initial stages of increasingly more mature fantasy behaviors. High levels of Involvemnt leads to increasingly allowing the child self-direction which then leads to either the child's expressions of fantasy or expressions of positive affect. In both cases these behaviors of the adult seem to have a strong and positive effect on the later fantasy and affective behaviors of the child.

DISCUSSION

Any interpretation of these findings must be tentative because of technical, methodological, and statistical problems. Some of the children in the latter study did not complete the full fifteen sessions and some of the tapes of the children who did complete all sessions were of such poor audio and/or visual quality that they were not usable. In two of the cells for the analyses of variance there was only one adult S in the first session. In the second session, these cells contained no adult Ss. The original plan of a separate analysis of variance of each cell had to be abandoned in favor of a more global, overall analyses of all four cells. Due to the limited number of subjects there were no attempts to separate the groups by sex. The influence of the sex variable on adult-child behavior was also unexplored. Also, there were not as many statistically significant findings as we expected.

Furthermore, adults whom the children encountered in both studies were not highly trained and experienced therapists. Rather they were relatively inexperienced college undergraduates. In the latter study, children they play with, however, were clinic-referred. These children were found to have similar problems to most children referred to child guidance clinics: school problems, aggressive behavior, inability to relate to peers, etc. But the undergraduates played with them for only 15 sessions of only half an hour each. It is highly likely that these children in general, mistrust adults, and an extended "acquaintance process" is needed before the cild trusts the therapist enough to convey important needs and concerns. Anna Freud (1964) spoke of three problems in working with children: lack of 1) insight into the problem, 2) a voluntary decision to seek help, and 3) the will to get better. She cited the need for a preparatory phase (often a year or more in length) during which the therapist builds up trust.

Despite these limitations, the method and results of these studies as well as the results and methods of related research do allow us to discuss and speculate, with some empirical support, about some relevant issues,

in child psychotherapy..

Fantasy Play in Child Psychotherapy

There have been a number of studies published recently which have involved direct training of children (typically disadvantaged and not clinic-referred) in imagery and imaginative play skills and measurement of changes in cognitive, affective and social behaviors of the children. Many of these studies have been conducted by (and past research reviewed by) Singer and his colleagues, (Singer, 1973; Singer & Singer, 1976). As these studies indicate, many children are deficient in such skills and a relatively short training program (often emphasizing adult modeling) is found to result in significant increases in child behaviors indicative of healthier functioning and adaptation. It is possible that such training would also have very positive effects on the behavior of many clinic-referred children.

We can also note that although analysis of emerging fantasy and play behavior has always been at the very core of various psychoanalytic therapies, there have also been recent attempts to implement more structured and direct techniques to elicit such material from children, including Gardner's "mutual storytelling technique" (Gardner, 1971; 1975: see also Kritzberg, 1975, and Winnicott, 1971). We agree with Singer that: "If we take the position that symbolic play or fantasy has distinct advantages in the therapeutic process, we might wonder whether it would not pay for therapists to institute somewhat more systematic efforts at training children to engage in make-believe play as part of their therapeutic armamentarium."(pg. 254)

The majority of child psychotherapists, however, probably do not directly train, model or attempt to directly initiate or elicit fantasy behavior. Most probably wait for such behavior to emerge in their "free play" encounters with children and then either use such play as material for interpretation or as an occassion to reflect upon the child's current experiencing and convey warmth and respect.

There have been case studies detailing the changes in fantasy play over the

course of a child's psychotherapy but we have found no other attempts aside from our own, that empirically charts the course of such changes in a group of children. Our efforts, however, as noted previously, do not approximate, closely enough, the "real world" of children in psychotherapy. Similar to Moustakas' (1955) speculations about and measurement of changes in positive and negative attitudes and affects over the course of therapy we need to study changes in fantasy of a very large number of children. Would most children's play in the early sessions be dominated by their playing victim or aggressor roles, by much object and animal references and fluctuating certainty and by many wish fulfilling fantasies of low scope and transcendence? In later sessions (of successful psychotherapy) would we observe play that includes more provider-protector roles, more human references, more replication fantasies of complex scope and high transcendence, and less fluctuating certainty? And what therapist behaviors would produce such changes? Are permissiveness, empathy and acceptance necessary and sufficient to produce such changes? Is it possible that these therapist qualities (and communications) are necessary in producing trust and respect but only therapist involvement, mutual participation in, if not, direct initiation of fantasy and imagery will result in such changes? Is modeling by the child of such therapist behavior the most important cause of such changes? Would such modeling quickly extinguish, if there was not a long term and intimate relationship with the therapist?

And what relationships exist between changes in "in therapy" fantasy behaviors and children's behavior at home and in school including parents', teacher and peer ratings?

Research in Child Psychotherapy

We now have available a very, very large number categories and variables that could be applied to the study of the process and outcome of child psychotherapy. Along with developing specific measures for specific children

in specific contexts, the strategy preferred by behavior modifiers(see especially, Gelfand and Hartmann, 1975), there are a great many child, parent, family, teacher and peer rating scales covering a great variety of a child's cognitive, affective, somatic and social behaviors available for use. Many of these scales can be found in Johnson's (1976) two volume collection of tests and measurements. Evans and Nelson (1977) have recently reviewed a great many of the available assessment devices and procedures. Specifics of well-researched assessment measures (often developed for the identification of "high risk" young school children) can also be found in the work of Bower (1969), Cowen et al. (1957), Kellam et al. (1975), Kohn (1977), and Spivack & Shure (1974).

The abundance of measures suggests the need for a parallel volume to Waskow & Parloff's report of NIMH's Clinical Research Branch Outcome Measures Project. Included in their volume are reviews of a wide variety of adult outcome measures and a possible "core battery" which Waskow urges be used by therapists of all orientations in a nationwide assessment of changes in adult psychotherapy.

The research-based theorizing of Singer and his colleagues (1973; Singer and Singer, 1976), Smilansky (1968), Wowkanech (1977) Moustakas (1955; Moustakas, Sigel & Schalock, 1956),& Gould (1972) have also made important contributions to developing possible outcome measures. As important, is the insights they provide about child development that can help in our attempts to understand the unfolding process of changes in, possibly, <u>all</u> psychotherapies of children. It is likely that changes in fantasy, play and other affective and cognitive behaviors are correlated with, and possibly causative of, changes even in behavior modification approaches. "Play" therapists have typically, omitted measurement of changes in child behaviors in his/her environment and behavior modifiers have, typically, omitted measurement of changes in the "inner experiencing" of children. Both have given us incomplete

pictures of the process of change and the wide range of possible effects of treatment.

Fortunately, we are at a time when not only a multitude of measures are available, but analytical, and computer techniques and procedures are also available for detailed study of factors causing specific changes in child behavior. A basic question in any behavior change attempt is whether there are, indeed "essential ingredients" causative of various kinds of behavior change across differing therapy and behavior change procedures. We need to determine if there are specific family, environmental, therapist and child characteristics, as well as possible specific events during "early" and "middle" segments of therapy that are causative of events during the "late" segments of therapy, immediately after termination and the effects measured at one or more long term follow-ups. Various experimental designs, multivariate analyses of variance techniques, cross-lagged panel, partial, and path correlational analyses, and multiple regression procedures, are available and can help us, finally, to adequately study the course and outcomes of our attempts to change children's behavior. Our efforts so far, have been at best, insufficient.

We would like to urge the development of a "core battery" of process and outcome measures which could be used by mental health professionals in child guidance and community mental health clinics, in schools, in hospitals, and in private practice. A national child psychotherapy research center could be developed whose staff or consultants would provide help to those persons and agencies who would like to use such a "battery" and to which data (including audio- and videotapes of play sessions) from various professionals would be sent for analysis.

Finally, if we can find that by helping children confront their fantasies and develop fantasy skills that we are "providing them with on additional resource in their desperate struggle to work out profound experiences of rejection, lonliness, and confusions of identity" (Singer, 1973; pg. 254), we will surely have made a significant contribution to their lives.

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Table 1

Ages of children in months

TRAINEE			CONTROL		
Subject	Sex	Age	Subject	Sex	Age
1	F	48	1	F	55
2	F	62	2	F	72
3	F	72	3	F	72
4	F	74	4	F	84
5	M	52	5	M	59
6	M	54	6	M	66
7	M	59	7	M	75
8	M	77	8	M	83
9	M	90	9	M	87
	Mean 65.3			Mean 72.6	

TABLE 2

Intercorrelations of Selected Child Dependent Variables

	2	3	4	5	6	7	8	9	10	11
1. State. personal thought/behavior (F)[a]	.76**	.48*	.84**	.23	-.20	.03	-.20	-.22	-.41	-.51*
2. State. interpersonal awareness (F)		.68**	.95**	.50*	.15	.25	.37	-.37	-.60**	-.60**
3. Fantasy aggression ..			.73**	.88**	.38	.33	.46	-.74**	-.44	-.68**
4. Fantasy behavior				.50*	.22	.08	.42	-.48*	-.62**	-.72**
5. Reality aggression ..					.35	.38	.34	-.66**	-.29	-.72**
6. Nonrecognition						.74**	.47*	-.64**	-.31	-.34
7. Nonattention							.47*	-.62**	-.39	-.29
8. Dominant participation								-.68**	-.49*	-.22
9. State. personal thought/behavior (R)[b]									.47*	.47*
10. Excitement										.50*
11. Object mastery										

*p < .05
**p < .01

[a](F) = in the context of fantasy
[b](R) = in the context of reality

TABLE 3

Intercorrelations of Selected Student Dependent Variables

	13	14	15	16	17	18	19	20	21	22
12. Reflection of verbal content	.84**	.73**	.76**	.53*	.84**	-.61**	-.58**	-.81**	-.50*	-.69**
13. Reflection of motor behavior		.81**	.63**	.51*	.80**	-.76**	-.54*	-.82**	-.48*	-.63**
14. Interpretation			.63**	.49*	.71**	-.78**	-.55*	-.79**	-.53*	-.76**
15. Compliance clarified				.45*	.68**	-.39	-.31	-.56*	-.30	-.47*
16. Warmth					.50*	-.25	-.60**	-.78**	-.54*	-.52*
17. Reciprocal part. in fantasy behav....						-.63**	-.41	-.77**	-.39	-.67**
18. Ask question							.46*	.66**	.62*	.76**
19. Rejection								.66**	.77**	.63**
20. Nonattention									.58*	.70**
21. Criticism										.79**
22. Direction										

* $p < .05$
** $p < .01$

TABLE 4

Intercorrelations of Selected Child Variables with Selected Student Variables

	CHILD VARIABLES				
	STATE PERSONAL THOUGHT/ BEHAVIOR (F)[a]	STATE. INTERPERSONAL AWARENESS (F)	FANTASY AGGRESSION	FANTASY BEHAVIOR	REALITY AGGRESSION
STUDENT VARIABLES					
Reflection of verbal content	.65**	.58*	.53*	.65**	.33
Reflection of motor behavior	.49*	.59*	.71**	.69**	.52*
Interpretation	.42	.47*	.45*	.58**	.27
Compliance clarified	.64**	.59**	.48*	.60**	.27
Warmth	.26	.10	.23	.34	.10
Reciprocal part. in fantasy behav.	.84**	.77**	.74**	.86**	.55**
Ask question	-.36	-.38	-.64**	-.52*	-.48*
Rejection	-.13	-.23	-.30	-.31	-.09
Nonattention	-.45*	-.44	-.54*	-.53*	-.36
Criticism	-.10	-.24	-.33	-.28	-.24
Direction	-.47*	-.52*	-.41	-.57*	-.23

TABLE 4 (cont'd.)

	CHILD VARIABLES					
	NON-RECOGNITION	NON-ATTENTION	DOMINANT PARTICIPATION	STATE. PERSONAL THOUGHT/ BEHAVIOR (R)[b]	EXCITEMENT	OBJECT MASTERY
STUDENT VARIABLES						
Reflection of verbal content	.45*	.12	.61**	-.53*	-.40	-.29
Reflection of motor behavior	.68**	.36	.63	-.73**	-.39	-.46*
Interpretation	.59*	.45*	.50*	-.55*	-.36	-.27
Compliance clarified	.12	.15	.51*	-.49*	-.34	-.27
Warmth	.16	.05	.40	-.19	-.13	-.08
Reciprocal part. in fantasy behav.	.40	.15	.47*	-.58*	-.45*	-.53*
Ask question	-.59**	-.59**	-.52*	.37	.73**	.45*
Rejection	-.37	-.35	-.68**	.41	.16	.16
Nonattention	-.48*	-.18	-.59**	.55*	.16	.12
Criticism	-.32	-.47*	-.52*	.48*	.04	.02
Direction	-.49*	-.42	-.64**	.54*	.44	.27

*p < .05
**p < .01

[a](F) = fantasy
[b](R) = reality

TABLE 5

Overall Mean Difference Scores of "Cluster A" Variables

VARIABLE	GROUP[C]	OVERALL MEAN DIFFERENCE	F
Reflection of verbal content	T	7.70	37.43**
	C	0.29	
Reflection of motor behavior	T	11.44	8.89**
	C	2.55	
Interpretation	T	8.85	8.74**
	C	0.11	
Compliance clarified	T	1.44	1.51*
	C	-0.07	
Reciprocal part. in fantasy behav.	T	5.51	7.25**
	C	-1.74	
Warmth	T	0.48	0.12
	C	-0.48	

*p < .05
**p < .01

[C] T = Training condition
C = Control condition

TABLE 6

Overall Mean Difference Scores of "Cluster 1" Variables

VARIABLE	GROUP[c]	OVERALL MEAN DIFFERENCE	F
State. personal thought/behavior (F)	T	3.29	19.45**
	C	0.44	
State. interpersonal awareness (F)	T	3.66	6.49*
	C	-0.07	
Fantasy aggression	T	3.40	6.78*
	C	0.19	
Fantasy behavior	T	4.81	13.13**
	C	-1.18	
Reality aggression	T	3.88	1.32
	C	2.18	

*p < .05
**p < .01

[c]T = Training condition
C = Control condition

(F) = Fantasy

TABLE 7

Mean Differences in the 20th Session
("Cluster 1" Variables with Significant Interactions)

VARIABLE	GROUP[c]	MEAN DIFFERENCE	F
State. personal thought/behavior (F)	T	8.88	14.33**
	C	1.33	
State. interpersonal awareness (F)	T	6.00	12.76**
	C	-0.88	
Fantasy behavior	T	7.88	21.50**
	C	-1.88	

*p <.05
**p <.01

[c]T = Training condition
C = Control condition

TABLE 8

Comparison of Means Over Time Within Experimental Group
for Three "Cluster 1" Variables with Significant Simple Time Effect

VARIABLE	SESSION DIFFERENCES		
	7-13	7-20	13-20
State. personal thought/behavior (F)[a]	-0.55	-6.33**	-6.88**
State. interpersonal awareness (F)	-2.67	-4.44**	-2.77*
Fantasy behavior	-1.00	-5.11*	-4.11**

[a](F) = Fantasy

*p < .05
**p < .01

TABLE 9

Overall Mean Difference Scores for Cluster B Variables

VARIABLE	GROUP	OVERALL MEAN DIFFERENCE	F
Ask question	T	-7.62	12.36*
	C	-1.77	
Rejection	T	-0.62	12.85*
	C	1.22	
Nonattention	T	-7.14	8.80*
	C	0.70	
Criticism	T	-1.40	23.43*
	C	1.85	
Direction	T	-7.22	36.87*
	C	1.59	

*p <.01

[c]T = Training condition
C = Control condition

TABLE 10

Content of children's fantasy behavior

SESSION	GROUP	CHILD	MAJOR CONTENT
1	T	B	Aggression against animals using hand puppets.
1	T	D	Animals embark on train ride to circus; circus portrayed.
1	T	G	C makes a man out of clay; describes man and puts him in house.
1	T	I	C plays cars and trucks; creates garage and makes car wheels of clay.
1	C	C	C portrays car accident and calls repairman on phone.
1	C	D	Development of house theme--C inserts various food, furniture and cleaning objects in house.
1	C	E	Development of house theme--C inserts food, furniture and dolls in house, elaborates functions.
1	C	F	C elaborates role aspects of various puppets, e.g., "This is the father."
7	T	D	C describes personal accomplishments: capturing a chimp, killing a whale, fighting an alligator, saving someone.
7	T	B	C role plays angry mother, asks S to role play naughty girl; C prohibits S in visiting Santa.
7	T	A	C shoots every animal in playroom; each animal falls dead.
7	T	E	C role plays mother; S role plays father; supper experience played out.
7	T	F	C talks with S over phone, acquaintance made; thoughts and behaviors discussed.
7	T	I	C beats up big man (bobo doll) for depriving him of candy; C then gives halloween candy to big man in apology.

TABLE 10 (Cont'd.)

Content of children's fantasy behavior

SESSION	GROUP	CHILD	MAJOR CONTENT
7	C	B	Physical aggression at student using hand puppets.
7	C	D	C and S pretend to have brand new house; C and S set up house and live in it.
7	C	E	C and S play sisters; go shopping together to get food for grandma.
13	T	A	C aggresses physically against S using hand puppets.
13	T	B	C role plays mother, S plays child. C and S go hunting in jungle for bears.
13	T	D	C plays doctor; S plays child with bad heart. C gives S painful shots and discusses inevitability of pain.
13	T	G	C puts on comedy show for camera; C portrays himself as strongest man on earth.
13	T	F	C role plays mother and cowboy; engages in aggression against S.
13	T	H	C and S engage in doll play; discuss roles and functions of dolls.
13	T	I	C role plays policeman; arrests S for speeding.
13	C	B	C and S use animals to create a zoo.
13	C	D	C and S use hand puppets; discuss feelings of like and dislike about various real people
13	C	I	C physically aggresses against S using hand puppets.
20	T	A	C aggresses against animals and puppets using hand puppets.
20	T	B	C has S cut body parts from C; C role plays mother; S plays naughty girl; C kills S and marries policeman.
20	T	C	C role plays mother; S plays child; C cooks dinner for S.

TABLE 10 (Cont'd.)

Content of children's fantasy behavior

SESSION	GROUP	CHILD	MAJOR CONTENT
20	T	D	C role plays doctor; S plays child with bad heart; S gets painful shots.
20	T	F	C and S discuss personal attributes of puppets.
20	T	G	Mortification of all objects, animals and people in the world; bury them with a bulldozer; resurrection.
20	T	H	C and S discuss feelings thoughts and behavior of puppets.
20	T	I	S's car breaks C's car and C's car goes to hospital for 7 weeks.
20	C	E	C and S discuss functions and roles of food, furniture and people in doll house.
20	C	F	C and S set up doll house and discuss functional aspects of people and objects.

TABLE 11

Subjects

Group	Session	1	6	11	15
HPS-Trainee	(N = 8)	8	7	7	6
HPS-Control	(N = 10)	10	5	6	3
LPS-Trainee	(N = 11)	10	9	3	8
LPS-Control	(N = 7)	7	6	6	5

TABLE 12

Intercoder reliabilities

Variable	Videotaped Session 1	6	11	15	Average
Transcendence index	.43	.22	.43	.42	.47
Divergent thinking	.16	.23	.25	.27	.22
Scope of fantasy	.34	.42	.62	.48	.54
Concentration	.53	.16	.51	-.19	.34
Identification	.70	.32	.68	.76	.64
Fluctuating certainty	.00	.00	.00	-.09	-.02
Superego constancy	.37	.34	.45	-.02	.31
Wish fulfillment vs. replication	.22	.42	.32	.55	.40
Human references	.51	.86	.74	.77	.71
Animal references	.32	.62	.71	.87	.63
Object references	.64	.74	.91	.64	.75
Affect	.72	.65	.65	.09	.87
Angry-annoyed	.87	.67	.70	.84	.86
Fearful-tense	.50	.67	.58	.56	.59
Lively-excited	.73	.68	.85	.34	.70
Elated-pleased	.29	.62	.26	.16	.38
Ashamed-contrite	.26	.84	.75	.56	.62
Contemptuous-disgusted	.54	.83	.53	.58	.71
Fatigued-sluggish	.44	.68	.93	-.28	.41
Sad-downhearted	.82	.51	.95	.51	.78

TABLE 13

Cell frequencies for analyses of variance

Group		High Potential		Low Potential	
		trained	untrained	trained	untrained
Communication of Acceptance	High	7	3	7	1
	Low	1	4	4	5
Allowing Self Direction	High	7	1	6	1
	Low	1	7	4	5
Involvement	High	7	3	7	1
	Low	1	4	4	5

TABLE 14

Multivariate analysis of variance of the mean fantasy output of the children based on Involvement x Training x Potential

Source	df	F
Involvement (a)	5	1.4307
Training (b)	5	6.7340*
Potential (c)	5	3.5552
ab	5	2.5813
ac	5	2.7911
bc	5	10.5709**
abc	5	11.5295**
Ss within cond.	20	

$p < .05$*
$p < .01$**

TABLE 15

Cell means for the significant Potential x Training interactions for Involvement

Fantasy variables	Training		Potential	
	high-high	low-high	high-low	low-low
Elated	58.98	99.75	78.31	75.73
Sad	52.01	59.68	78.31	75.73
Ashamed	56.26	61.35	55.05	47.24
Fatigued	43.03	53.62	53.57	45.62

TABLE 15

Cell means for the significant Involvement x Training x Potential Interaction.

		Training		Potential	
		High	Low	High	Low
	Divergence				
Involvement	High	3.868	15.12	4.300	14.85
	Low	1.666	1.815	2.228	1.965
	Concentration				
Involvement	High	160.400	162.200	160.200	138.900
	Low	162.200	155.900	161.800	168.700
	Human references				
Involvement	High	16.27	27.57	4.697	37.87
	Low	4.625	11.07	24.91	5.352

TABLE 17

Multivariate analysis of variance of the mean output of the children based on Allowing Self-direction x Training x Potential

Source	df	F
Allowing Self-direction (a)	5	2.9703
Training (b)	5	.2213
Potential (c)	5	.7187
ab	5	2.1493
ac	5	3.2972
bc	5	1.9325
abc	5	5.3399*
Ss within	20	

$p < .05$*

Figure 1

Mood Checklist
(from Singer, 1973; pgs. 268-269)

Mood	Score 1 not at all	2 slightly	3 moderately	4 very	5 extremely
Angry-annoyed		shrug, tsk-like comment	frowns	stamps feet, bangs table, shrill voice	clenched jaw, clenched fist, red face, menacing posture, glaring, yelling
Fearful-tense		pacing up and down, tapping feet or fingers	biting nails, wringing hands, pale, eyes wide	cold, sweaty squirming	facial trembling, body trembling, body rigid, hair erect, tremulous or quavering voice
Lively-excited		whistling, humming	high color, flushed face, eyes sparkling	jabbering, giggling, wriggling	skipping, jumping, dancing, bounding about
Elated-pleased		smiling	broad grin	joking, jesting, clapping hands	laughing, hugging

Figure 1 (Cont'd.)

Mood Checklist

	Score				
	1 not at all	2 slightly	3 moderately	4 very	5 extremely
Sad-down-hearted		looking down at floor	frowning, pouting, droopy mouth	lips quivering, voice quivering, drooped shoulders, hunched position	crying, sobbing
Ashamed-contrite		looking quickly away, eyes averted	head down	shrinking posture, blushing, lowered voice, begging pleading voice	hiding one's face
Contemptuous-disgusted		looking askance	turn up nose, turn back on, point at	sneering, smirking, lips curled, shuddering	booing, hissing, hooting, snarling
Fatigued-sluggish		leaning, slouched, whining voice	feet dragging, plodding	eyes half closed, heavy-lidded, yawning	head on table, head bobbing, sprawled out in chair or on floor

APPENDIX A

Categorization of Undergraduate Behavior

(Mean percentage of agreement between coders in parentheses)

1. Reflection of verbal content. S (student) selects an aspect of C's (child) remark and restates the content of that remark. (.86)
   Ex: C-That's a car, this is a truck.
   S-That's a car, this is a truck.

2. Reflection of feelings. S restates the feelings stated by C. (.99)
   Ex: C-I don't like to play in this room.
   S-You don't like it at all in here.

3. Reflection of motor activity. S describes the motor behavior of C. (.91)
   Ex: C examines marbles.
   S-Now you're picking up the green marble.

4. Interpretation. S verbalizes C's feeling or thought state by inference from C's verbal or non verbal behavior. That is, S's statement is not literally based upon C's behavior, but has the quality of being an inference which may be correct or incorrect. (.82)
   Ex: C is punching the bobo doll.
   S-You feel angry right now.

5. Participation in fantasy-initiating. S is contributing to the development of C's fantasy by offering new content, verbalizing as yet unstated feelings or thoughts, or by beginning the fantasy, even before C is clearly thinking or acting on a level of fantasy. (.74)
   Ex: Each with a telephone.
   S-Hello, is Susan there?
   C-Yes, this is Susan.
   S-Can you come out to play, this is Sharon.
   C-O.K.
   S-O.K. bye. (hangs up)
   C is shooting a gun at an animal.
   S-And you're shooting the elephant dead. You're going to kill all the animals in the playroom.

6. Participation in fantasy-reciprocating. S is involved in C's fantasy behavior, but clearly does not contribute anything more to its structure or content. Participation can take the form of merely watching, laughing, reflecting motor or verbal content, or responding to C's cues in a passive manner. (.73)
   Ex: C and S have puppets.
   C-I'm a strong alligator.
   S-You're a strong alligator.
   C-Yea, and you're a chicken.
   S-The chicken's going to lose its neck.

7. Nonattention. S directs his attention to something other than C. (.79)
   Ex: S fixes truck while C looks for something.

8. Compliance-clarified. S respond to C's commands, suggestions, or requests, but only after reflecting C's request, command, suggestion, etc. (.85)
   Ex: C-Go get the ball.
   S-You want me to get the ball. All right.

9. Compliance-unclarified. S responds to C's suggestion, command, or request, without hesitation, clarification, or conveyance to C as to what C is requesting, suggesting, or commanding. (.88)
   Ex: C-Go get the ball.
   S-All right (Goes and gets the ball).

10. Statement of own emotion. S verbalized his own feelings. (.99)
    Ex: I'm sorry that you didn't go to to the show.

11. Genuineness: S is truly "with" himself. He does not appear anxious of uncomfortable. Those things which he says or does seem to come naturally to him. (.70 This category was rated on a scale from zero to three).

12. Praise. S expresses approval of C's productions or behavior, but not of C as a person. (.87)
    Ex: That's a find picture you've made.

13. Offering information. Either verbally, demonstratively, or both, S offers knowledge or guidance. (.75)
    Ex: C-Why won't this open (cash register).
    S-You have to press the keys first (S either simply says it, or he actually performs it, but in either instance, C is in some manner being instructed.

14. Giving help. S gives physical aid to C, without instruction or attempt to involve C in the completion of the task. S is not helping C to master the problem, but is simply responding to an unstated request for assistance. (.69)
    Ex: C-Why won't this open? (cash register)
    S-Takes cash register, opens it, and gives back to C.

15. Orienting. Limits, boundaries, and roles are indicated by S. (1) Boundaries of the situation are indicated by S. Ex: S-You may do whatever you like here. (2) S structures time. Ex: We have ten minutes left to play. (3) Roles are indicated by leaving responsibilities to C. Ex: I can't tell you what to do, you must decide for yourself.
    Ex: You can use these things in any way you want. (.69)

16. Directing. S attempts to influence C by command or suggestion, i.e., S tells C what to do. (.80)
    Ex: S-If you don't clean up, we can't come here any more.
    S-Put the gun on the table.
    S-Get me the book, will you.

17. Setting limits-explanation. S attempts to modify C's behavior by reducing the intensity, speed or manner of executing it, he apparently attempts to stop or reduce the activity. Verbal explanation for limit setting if offered. (.99)
    Ex: S-Be careful or you will get hurt.
    Ex: S-I don't think you should pound the microphone so hard. It might break.
    Ex: S-I know you'd like to stay here longer, but we have to go until next week.
    Ex: S-Bobo dolls are fun, but not for biting, only for punching.

18. Setting limits without elaboration or explanation. S attempts to reduce the intensity of, speed of, or manner of executing C's behavior, without offering any reason, admonition, or conveying any understanding of C and/or his behavior. (.99)
    Ex: C is putting the bobo doll out the window.
    S-Stop that, bring it back here.
    Ex: Don't leave your coat on the floor.
    Ex: Don't shoot the dart gun at my face.
    Ex: Leave the microphone alone, Jim.
    Ex: S pushed C away from the microphone. "Get away".

19. Asks question. S interrogates C. (.84)
    Ex: S-What do you want to do today, Jim?
    S-How many brothers do you have, Jim?

20. Criticism. S expresses disapproval of C or C's productions, either subtly or very obviously. (.70)
    Ex: C is shooting at target.
    S-You missed again.
    C is drawing a picture.
    S-That doesn't look like Beaumont tower.

21. Warmth. S conveys a general liking for C, either through his facial, vocal or postural expressions. (.65 This category was rated on a scale from zero to three).

22. Rejection. S conveys to C that either C or C's productions are not acceptable. Rejection can be conveyed through vocal, facial, or postural expressions. (.71 This category was rated on a scale from one to three).

APPENDIX B

Categorization of children's behavior with undergraduate.

(Mean percentage of agreement in parentheses.)

1. Statement of personal thought or behavior in the context of reality.
C verbalized an idea, experience, or behavior in reference to herself, either through the use of a personal pronoun (I or me), or through the verbalization of her own action. (.65)
Ex. C-I am five feet tall.
C-I went to the store yesterday.
C-I can count to ten
C-(drawing a picture) A horse with red eyes.
C-(hitting the bobo doll) Boom.

2. Statement of personal thought or behavior in the context of fantasy.
Same as #1 above, except that the verbalized self reference occurs within C's fantasy involvement, i.e., while C is assuming a role other than his own. (.76)
Ex: C-Hello Mr. Mouse, I have been wiating for you. I'm going to give you some cheese.
C-(talking on telephone) Susan, this is your mother. Come home right away. I want to talk to you.
C-(punching the bobo) I hurt him. I bit his nose.

3. Statement of personal feelings in the context of reality.
C verbalizes emotional feelings of the past, present, or future. (.77)
Ex: I like (love, hate, am scared of, feel bad about, am happy, want, etc.)

4. Statement of personal feelings in the context of fantasy.
Same as #3 above, except that verbalization of feelings occurs within context of C's fantasy involvement. (.71)
Ex: (playing with puppets) Now, Julie, if you ever do that again I'm going to be very angry.
(holding the crocodile) The crocodile hates the lion.

5. Statement of interpersonal awareness in the context of reality.
C verbalizes a comprehension of his involvement in a relationship with another person, either the student or someone else. Often occurs using the pronoun "we". (.55)
Ex: We can play chinese checkers.
You bring me the chair.
Mommy and me and daddy makes three.
I am older than my brother.

6. Statement of interpersonal awareness in the context of fantasy.
Same as #5 above, except that the verbalization occurs within an unreal context. (.86)
Ex: C-The big bozo is going to beat the little bozo up.
C-The doctor is going to give you a shot.

7. State of external condition.
C verbalizes his awareness of some environmental fact, one not linked to human relationships. (.68)
Ex: It's hot in here.
It's getting dark outside
The toys have changed.
Hey, there's a big bobo doll.

8. Statement of expectation, intension, or prediction.
C verbalizes an anticipation of an event, to come in the future. (.57)
Ex: After I put these marbles away, I'm going to punch the bobo.
Next week we can play again, o.k.?
If I don't clean up the floor, Mommy's going to be angry.
I bet there is someone behind the wall.

9. Behavioral expression of aggression in reality (R) in fantasy (F).
C expresses anger, or aggression, either in fantasy or reality. May be verbalization, behavior, or both. (.74)
Ex: punching the bobo doll; shooting a dart gun at the student; shooting at the animals (not in a manner of target practice) spanking a puppet, hitting oneself on the head, knocking down the bowling pins (again, not in a manner of mastery or perfecting one's skill), exclaiming "You bad toy".

10. Behavioral expression of affection in reality (R) or fantasy (F).
C expresses warmth either in fantasy or in reality non verbally. Verbalizations may accompany behavior, but are not sufficient for presence of behavioral expression. (.87)
Ex: Giving milk to a baby doll. Kissing the bobo. Giving candy to the bobo, stroking a puppet.

11. Behavioral expression of excitement.
C expresses his excited state verbally or nonverbally. This behavior differs from expressing aggression in that it is more diffuse and less attacking. (.85)
Ex: hilarious laughter; rolling on the floor; playing nok-hockey in a fury; bouncing on the bobo doll.

12. Behavioral expression of object mastery (creativity).
C attempts to manipulate, control, improve, understand, improvise, or destroy an object. (.75)
Ex: Target shooting; trying to understand how the chinese checkers are played, deflating the bobo doll; catching a football; trying to know down the bowling pins; trying to get the rings on the hoop; doing the hula hoop; trying to fix a broken toy; using a caracass in place of an iron, in order to iron clothes; asking about, or playing with the microphone.

13. Direction.
C attempts to influence S's behavior by command, strong suggestion, or non-verbal action. Essentially, C tells S what to do. (.71)
Ex: Go get the blocks and put them over there.
If you get the blocks, then we can build.
C gives S a block while building a house.

14. Seeks help.
C explicitly asks S for assistance, not in a direction style. (.75)
Ex: Would you go get the blocks?
Can you hold this for me?
I can't do it. Please untie my shoes?

15. Changing involvement.
C changes his focus of interest from one activity or toy to another. (.76)
Ex: C plays with car. Stops. Then goes and punches bobo.

16. Nonattention-self involvement.
C directs his attention to something other than S, not merely glancing away at a toy, but becoming involved in an activity, and seemingly becoming unaware that S is in the room. Nonattention must be at least ten seconds. (.63)

17. Nonrecognition.
C does not respond to the stimulation offered by S. S may ask questions, reflect feelings, describe C's behavior, or direct C. C will act as if he has not heard S. (.70)

Note: Nonattention differs from nonrecognition in that the former is in conjunction with a stimulus emitted by S, whereas the latter requires no stimulation on the part of S.

18. Joint participation in activity. (D,S, or N)
Dominant role-C and S are mutually engaged in an activity, and C is clearly directing the course of involvement, suggesting, orienting, and seeking to put S in a submissive role. (.53)
Submissive role-C and S are mutually engaged in an activity and clear-C is responding to the direction, suggestion, and orientation of S; C is naturally complying and being comfortable in S's domination. (.62)
Nondiscernible role-C and S are mutually engaged in activity, and clearly neither C nor S acts in a dominant or submissive role. There is a free give and take of suggestions, orientations, questions, and directions. (.70) This category is coded on a scale from one (D) to five (S) for each five minute interval.

19. Fantasy behavior (general).
C uses objects, materials, activities, or situations as though they had properties or attributes other than those which they apparently or actually seem to possess.

APPENDIX C

Scales used to rate undergraduate behavior.
(From Stover, Guerney, & O'Connell, 1970)

The scales range from a high rating of one to a low rating of five. Each point on the scale is followed by typical responses obtained from codings of the direct observations of adult and child

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1. Communication of Acceptance

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1. Verbal Recognition and Acceptance of Feelings: Examples: You're proud of how you fixed that; That makes you feel good; That made you angry; You feel better already; You're enjoying that; You really like smashing that.

2. Verbal Recognition and Acceptance of Behavior Only: Examples: You got it that time; You really stabbed him; You're getting a workout; Bam, Bop, etc.; You're hitting the mother doll.

3. Social Conversation or No Conversation: Examples: I'm not so good at building toys; Mary's been away most of the summer; Mothers aren't very good at that; These are nice toys.

4. Slight or Moderate Verbal Criticism Stated or Strongly Implied: Examples: That's cheating; The head you made is too big; You'll ruin the floor; That's not fair; You'll have to be more careful; Watch what you're doing; No, not that way.

5. Verbal Cticism; Argumentative, "Preaching," Openly Rejecting Feelings or Behavior, Abusive Language: Examples: It's not nice to feel that way; You're nasty; I'm talking to a dope; You're not so hot yourself; You're a fresh kid; You see, I told you to do it the other way.

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2. Allowing the Child Self-Direction

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1. Shows Willingness to Follow Child's Lead (No indication to the contrary: i.e., there need be no verbal comment; behavior complaint with the child's directions or lead is sufficient). Examples: You want me to do it for you; I'm supposed to pick them up (or simply moving to do so); You'd like me to play catch with you (or simply doing so at the child's request).

2. Child Has Option for Lead-Taking (Choice genuinely left to the child but mitigated by direct or indirect suggestions; gives unsolicited praise; volunteers information; asks for information). Examples: What shall we do?; What would you like me to make?; You did that right; Shall we pretend it (the phone) rings?; It's under the table; You can shoot this if you want; Good ("Good" reinforces a certain type of activity and therefore represents a degree of control).

3. Takes Lead Without Giving Child an Option. Unsoliticted instruction on how to do or accomplish something; "teaching," prase accompanying a suggestion; questions with intent to guide the child. Examples: Play with what you have; You have to keep practicing; Maybe the best way is to take the crayons out of the box; Take your time and aim it; See if you can do it again just like that; Are you sure that's the way it goes?

4. Directs or Instructs Child to do Something. Initiating new activity when there has been no previous sign of inertia and/or resistance shown by the child. Examples: Put the tinker toy away first; Why don't you paint something; Let's play with clay; You'd better put him back together; Don't squeeze water in there.

5. Persuades, Cajoles, Demands, Pushes, Interrupts, Interferes in Child's Activity, Insists on New Activity. Resistance by the child is implicit, or there is inertia on the part of the child which the parent is seeking to overcome. Examples: You've got to play with something else now; You'd better give me one; You can't do that anymore; I told you not to turn out the lights; That's enough of that; No, take this one.

3. Involvement

1. Fully Observant of Child's Behavior, Adult Gives No Indication of Being Unaware of the Child's Behavior. More attention is given to the child than to other stimuli, such as the objects of the child is using. (Such attention is not necessarily sympathetic or constructive.) The adult may be involved in a joint activity; e.g., role playing, games. He participates in an active way physically as well as verbally when it is appropriate.

2. High Level of Attention. Although not involved in anything other than which also involves the child, the adult's concentration here is almost exclusively on activities per se rather than child's behavior. Joint activities, such as card playing and dart shooting, lend themselves to "2" scores when the adult is keenly interested in the game itself (e.g., the cards that turn up), without paying attention to the child's reactions and behaviors.

3. Marginal Attention: The Adult is Involved in His Own Independent Activity to a Degree that Interferes Somewhat with Attention to Child. No joint activity. Adult is preoccupied with own activities to the extent that he is not always providing company; e.g., briefly primping in a mirror, briefly attending to own attire, inspecting nails. The adult may occasionally remark spontaneously on the child's activity.

4. Partially Withdraw, or Preoccuied. Adult may infrequently observe child's activity, but doesn't aomment spontaneously. Adult may be so involved in his own role (e.g., in independent play) that he fails to attend to the child's apparent needs. He responds promptly, however, when alerted by the child.

5. Completely preoccupied, or Self-Involved, or Shut-Off. Here the child is ignored and must repeat or prompt to get a response from the adult. The adult is completely absorbed with an independent activity or with his own thoughts for prolonged periods, or engaged in prolonged self-grooming; seemingly unaware and uninterested in child's behavior